

Brasil 1976

①

**29c**



**NOTE BOOK**

**75 SHEETS**

No. KB-3387

No. KB-3388

TOP OPEN  
SIDE OPEN



2337  
Brazil 1976

1st Safari

2353 K, MO, NY



wings on Dohie cor

2357 (2356 best shot in  
Manaus)

2357

April 3, 1976

Ibirataia - 373 Km on the  
road - 12 Km from  
Ibirataia, rural zone  
type cor B-101 -

~~Atractantha~~

Atractantha sp.

Alt: 350 - 400 m.

Forest, most ~~of~~ cut  
down and disturbed  
especially in lower part  
of mbrs.

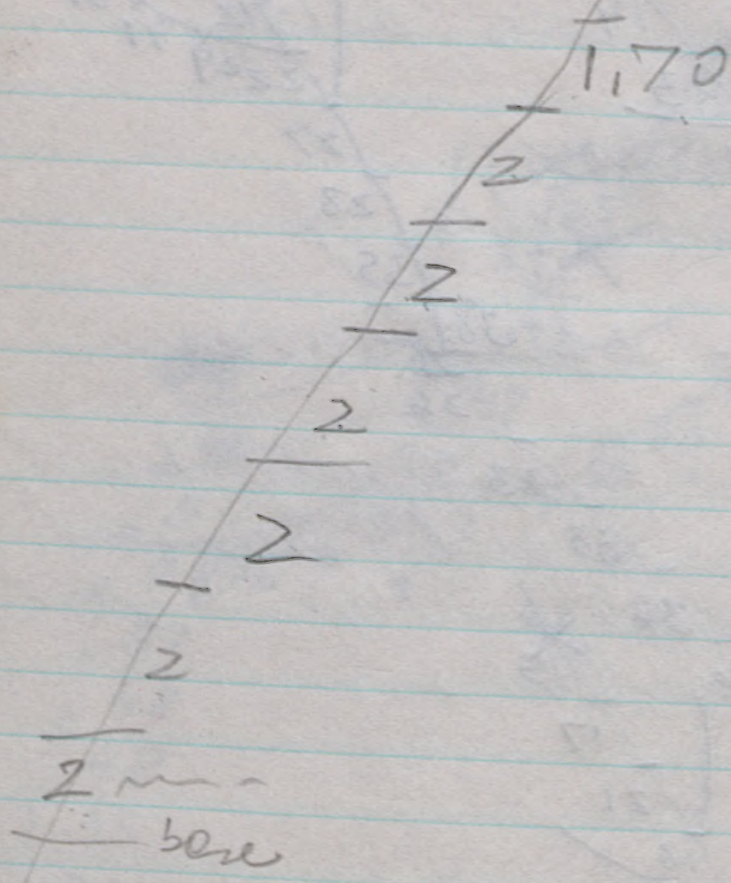






Total to use plate  
on road

13.7 m.



Abundant in ~~disturbed~~  
forest, dominant in  
higher part of woods.  
Dominant, ~~Area 1~~  
Delicate, thin, small  
leaves, climbing,  
and leaning over other  
plants and trees. Very  
weak and thin ~~with~~  
culms, overhanging

One main branch dominant  
with a crown of small  
ones at the base. That  
vertical axis most of  
the times takes over  
the main culm (whether  
broken) and take the  
lead, keep going up.  
In time, another central



axis of a latent such  
continue going.

looks very small, low  
specially in upper part  
of hill, where forest  
is ~~less~~ more dense  
and darker. Many  
new culms, very  
thin, even for no more  
than 3 m, then  
weak and airy.

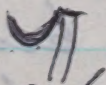
Culms solid, flexible  
thin, the very old at  
the base ~~is~~ up  
to 1.5 or 2 (very few that  
thick.) Culms with a  
ring of air canals  
near the walls.

Surface of culms very  
smooth, no hairs or  
wax.

Dark green.

bluns small ~~not~~  
sometimes no more  
than 6-8 - no  
more than 0.5 m. in  
diameter.

A ring of stiff hairs  
at the base of the  
culm sheath, on the  
node.

Culm sheath persists  
at on the new culms,  
only late deciduous  
act when the branches  
start to grow and  
expand. The culm  
leaf blade horizontal  
to reflexed; , many  
times curved, ~~concord~~  
concord.



In the same manner  
in lower parts mixed  
with a Heratohy of  
which ~~that~~ seem to  
grow up the hill-  
leaf small, narrow  
very thin & delicate  
They to not roll up  
easily when culms  
are cut -

Culms up to 14m  
±; but most of  
them very thin, 1/2cm  
in diam. and very  
small -

FAA: 3nal

2 large wide mouth.  
with buds & stipes  
and culm pieces.

1 (50cc) with leaves,

3 small clumps collected  
for cultivation -  
Photos:

W. & B. roll 13. (± from  
15 to end. and roll  
14. beginning to 4

lots: Ekharame:

roll (15), from 1 to end  
lost 6-8 pictures with  
wide angle -

beautiful forest -



K, MO, NY,

April 4

2358

~~2358~~

*Merostachys dermatis*.

Mun. Tibistaria, 23 Km  
N; NW of Tibistaria city.  
On top on slope of  
hill - "cancallera"

Alt. 250. ~~Bar~~ + 17-

Photo B. & W. Roll 14 (405 to end  
Exposure roll 16; + 2 barrancos

1 to  $\pm 1/2$  -

In <sup>natural</sup> forest, at present, Big  
being partially cut.  
Forking + small clumps  
about 60-70 cm in diam  
not many culms in it -  
climbing, only the new  
culms erect for about



5-6 m, then leaning  
~~on~~ on banks and  
trees.

~~All to~~

$\pm$  13-15 m tall - long  
internodes.

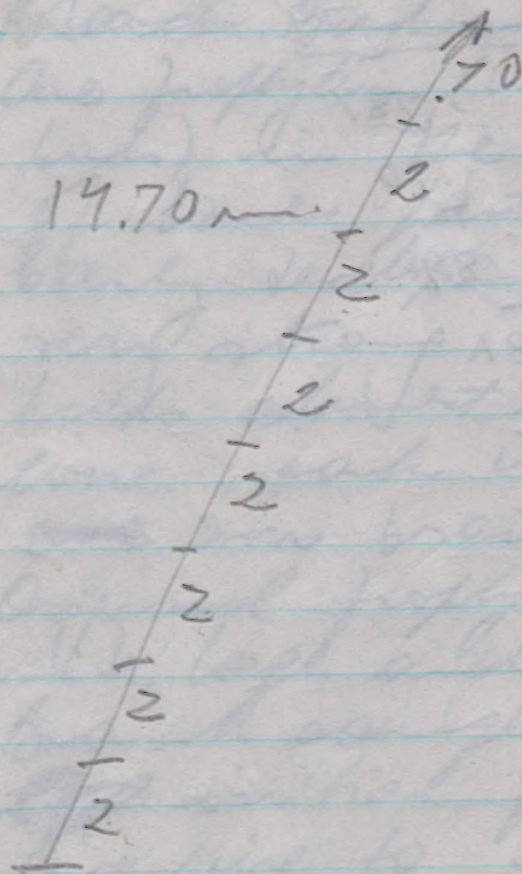
Bulbous hollow with  
thick wall, ca. 2-2.25 cm  
in diameter. Surface appears

"life", light & very dark  
green ~~spotted~~ ~~mottled~~ (can  
branches clear, young).

Nodes thick, a little  
prominent, covered by a  
velvety dense, white web of  
white, silky hairs. The  
node in itself, below  
 $\pm$  2 cm and above the  
ridge  $\pm$  1 cm the white area.  
Bulbous leaf deciduous at

young shoot

14.70 m





12.76 ~ 2

0.76

[illegible]

\*42

52

59

64

y67

 $\sqrt{75}$ 

76

79

87

90

89

81

77

65

162

58

65

62

32

the beginning of the bud  
development; culm leaf  
blade narrow, ~~the~~ reflexed  
deciduous early. Culm  
leaf with strong 7  
color light-dark striations.  
Branch Bud complement  
One prophyll (with 1? or 3? ~~leaves~~?)  
buds) in the nodes  
of lower part of culm.  
Early development: 3  
very strong, similar  
buds adaxial in one  
line, each with its  
~~own~~ own bracts & prophyll.  
Original prophylls very  
white, large and dark.  
Branch complement  
~~of~~ initial primordia  
five rise to 3 branches



Usually one of the side  
bud ~~at~~ start develop-  
ment (on the side  
the sheath opens -  
It forms a branch  
complement of 3  
equally dominant  
branches. Late, (sometimes  
early) each one will  
give one side branch  
from upper nodes of  
upward base of primary  
branch, sometimes, in  
older culms, a second  
branch is born on  
~~the top~~ on upper node  
of the 1<sup>st</sup> axi-  
is axi (3 =) very thick  
much more than  
main axi of culm.

with base inflated, cores  
by several short bracts  
Base of these axi is  
~~with~~ represented, a series  
of very short, but  
distinct internodes.  
In the 2<sup>nd</sup> branches  
almost always res-  
pond 1 or 2 "roots"? but  
or rounded, tip prominent.  
Culm has not divided.  
only branches at nodes  
bracts with leaf comple-  
ment very large, 90-  
1.25 m  $\pm$  long - with  
several ~~leaf~~ leaves.  
leaf blades very large  
long and wide, thick,  
smooth, flat -  
oral ~~with~~ etc several



are long, white, silky,  
curly just the tip -  
White ~~very~~ long hairs  
only at tip & recurrent  
on edge of sheath.

M. ternate seen in  
another hill  $\pm$  14 km  
south of this locality  
(The original one of  
1972) At present  
only vest of that  
original forest M.  
ternate is almost  
gone, a few plants  
are ~~scattered~~ surviving  
low. In both locali-  
ties M. ternate is in  
the lower parts of  
the hill slope, then

starts Merobary sp -  
(may look like, thin culm  
& tall, small leaves)  
and in the upper parts  
of hills only. Atracta the  
seen in the first area  
and Atr. mixed  
with another ~~set~~  
set M. in flower  
in this hill -  
M. ternate grows in  
beautiful, wet forest  
tall trees, with  
many lianas,  
~~stipitate~~ & climbing  
plants.

In this area grow:  
M. ternate in the lower,  
part, then Merobary  
thin leaves (CEC. 2359)



A little higher. Meront  
thick mixed with 1.  
Meront. On upper slope  
of hill M. - West (in flower)  
and some Astragalus.

FAA - 2 large nubs with  
buds - 1 small so with  
leaves.  
rhizome collected -

Merontachys

2359

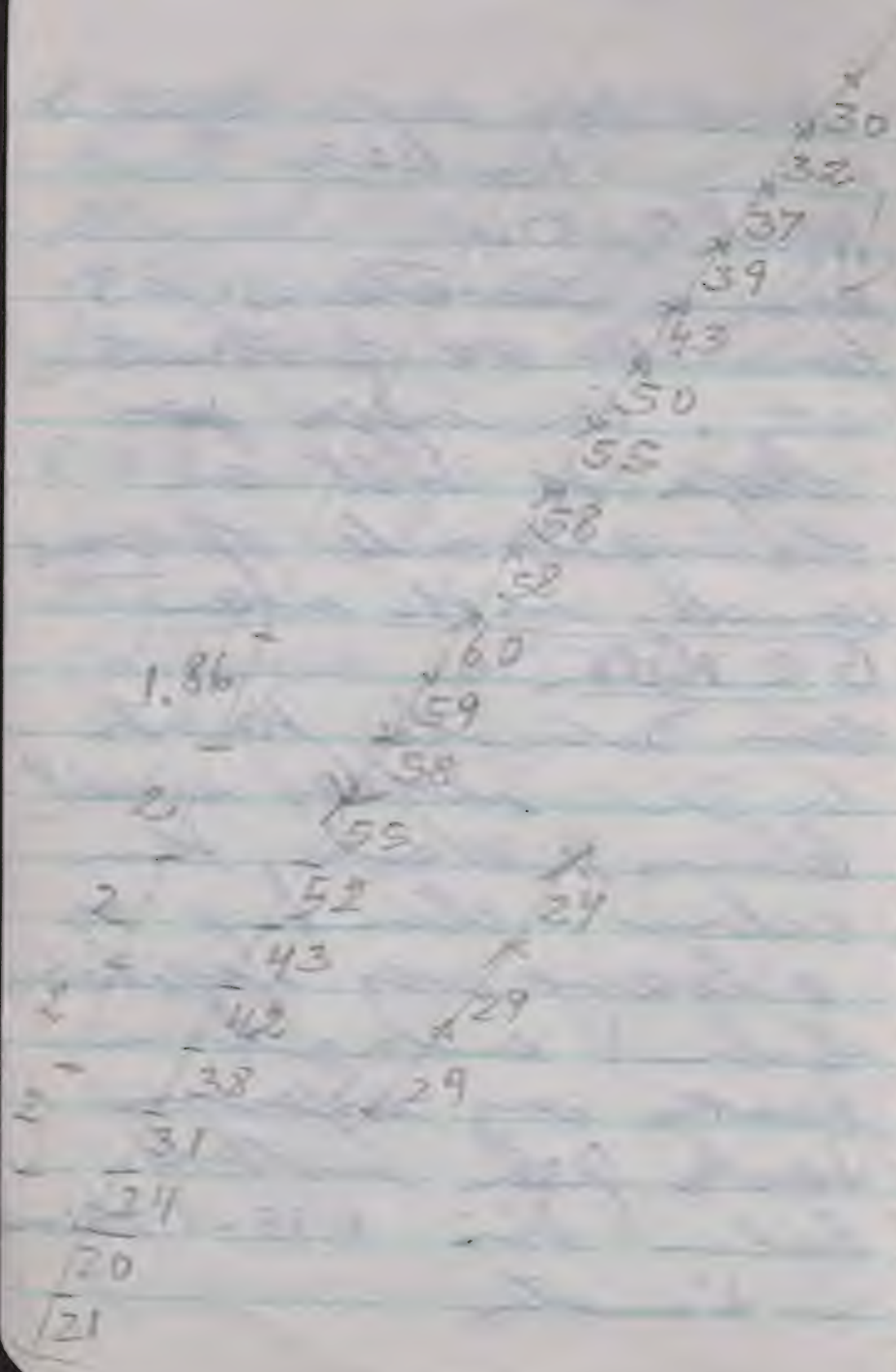
thin leaves

April 5, 1976

Thun. to Thiotaraia, 23  
km N-NW of Thiotaraia  
city. On upper ~~part~~  
slopes of hill on  
the right side of road  
concreted with main  
BR 1001.

~~Small~~ delicate Merontachys  
dry in rather small  
clump. Weak, thin  
culm, climbing to  
a leaning over vegetation  
but V and culm  
leaves very sparse.  
Dark green. not  
culm thin 0.75-1.25 cm  
in diameter.





Week Santos, climbing  
 may break x node  
 breaks thin with  
 less small, thin -  
 but complement in  
 typical Mentak, steel  
 type -

It glows in some place  
 in association with  
 next Mentak.

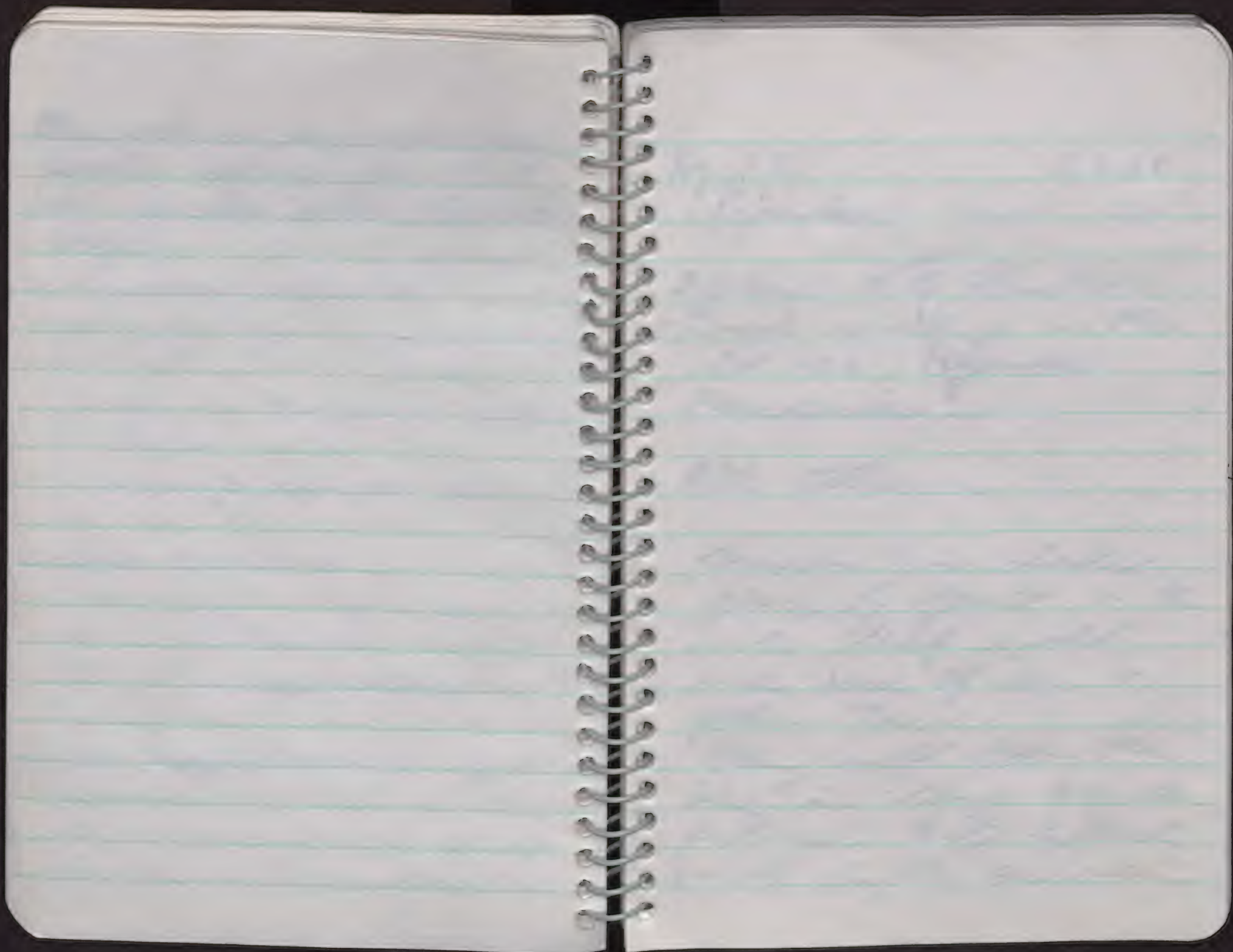
F A A, 3 vials 2 with  
 band, 1 with leaves  
 Pigeons collected -  
 no photos yet

Node without upper ridge  
 not protruding, it will  
 with the last, own it.  
 probably sheet in the



How much very scarce  
faint, not so abundant  
as in the other Heron-  
chys.







April 5,  
Pinar

2360

23 km. N<sup>N.W.</sup> of Hinstale.  
on road winding with  
BR 101 - Fajardo  
Maudslayi.

Alt. 250.

Common in shaded  
places of forest, with  
rich leaf mold,  
near base of trees or  
fallen trees.

Many inf. from the  
base in long slender  
culms - only 2 plants  
with inf. on main



culm -

FDA - 1 vial, less a vial -

bag - 1 " flowers -

2361

same locality -

Alt. 250 - 275.

Pteridophyte -

In humid forest  
with many other plants.

Pinnis, etc -

Bright bluish green  
completely different from  
the rest of all others  
seen in forest -

Specimen collected to cultivate



2362

April 5 -  
Same locality.

Alt. 250 m

*Ternstroemia* :

At the edge of forest  
on sharp slope



2363

*Ternstroemia* -

Same locality - Alt. 250

At edge of forest  
on slope, near  
*M. ternstroemia*

April 6

2364

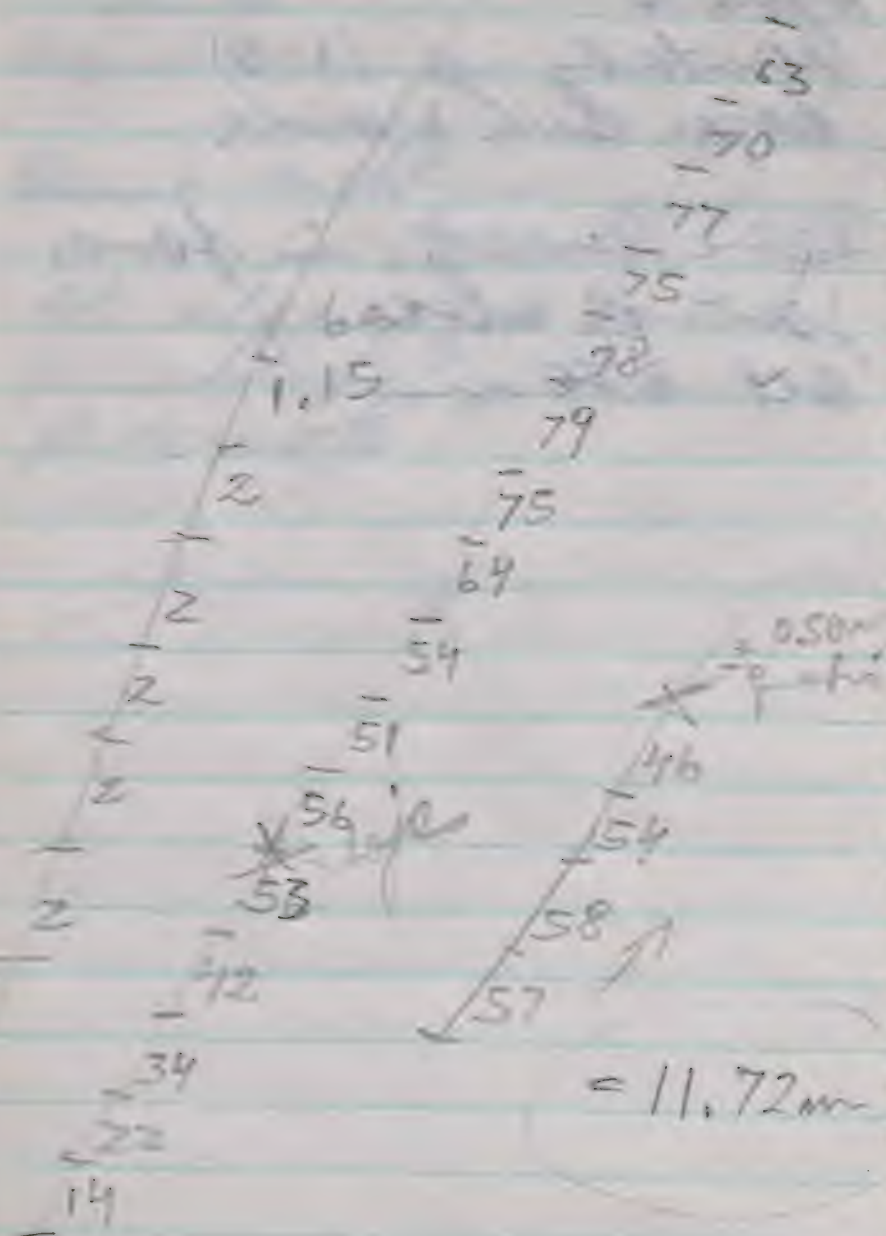
*Meriania* sp. (1-3)

larger, thick branches -

Same locality, in forest  
part of slope -

Alt. 250 m.







See the union  
of 3 buds in large  
cutting in lower  
part. ~~the~~  
bud start developing  
from side of stem  
opening.

At the end of young  
several buds  
but they are very thick  
buds, not already  
over-representation  
buds leaf blade  
narrow, reflexed  
and deciduous.  
Leaves wide

FAA - 2 vials, bud  
and leaf.

farmer of Arizona  
collected

Photo: B x W h' roll #  
17, (21 to 36)

color. h' roll # 16

28. to 37 -



April 6 K 2365  
Olyra (muretho<sup>2</sup>) scute

Same locality, on upper  
part of slope -  
Alt.  $\pm$  300 m -

Large clump, culms up  
to 3 m -

Some old inflorescences  
and in the same  
plants in lower #3  
node a huge sun-like  
bush of leaves with  
small leaves -



Beautiful forest, with  
tall trees, many lianas  
and climbing plant  
epiphytes.

Some of the tree:

~~Guera~~ Gueraua branca  
Gueraua semialba →  
Leguminosae, Mimosa  
Parkia pendula -

J. Karea: ~~genus~~ Mutigaya  
Leg.

Louro: - Lauraceae  
Ocotea or Nectandra.

Araca: Mirtaceae.

Oiti: Burseraceae

Oitizica: Moraceae

Pau pombo: Anacardiaceae

Tapirira guianensis

Bapeta: Sapotaceae

Sumore preto: Moraceae

Piqui preto: Buriacaulaceae

ser. Buriacaulon

Jatoba: Legum. Bupalpiaceae

Heminea corfarina

tararanga Moraceae

ser. Pukumã



2366

April 7

Same locality (Jenna  
to Meritorchys)

Alt. 300 m.

Seedlings of M. in pers?  
(multicaues?)

Many seedling of # size  
some still very small  
around dead classes



naltirenee?

Merortachy - <sup>pur.</sup> 2367  
April 7, 1976

Mun. Shintaire, ---  
same loc. (kno do  
Merortachy)

Act. 300 -

In upper part of hill  
in large clump, all  
dead and without  
of flowers. ~~then~~

Seems that plants  
had flowers for long period  
all culms with no leaves  
but in flor. Only in  
one or 2 culms still  
some culms a little  
green, and only in one.

we saw a new culm  
and another with  
bracts and green  
but no flowers. It  
was next to a dead  
culm. Still thin -  
Old culms very robust  
 $\pm$  up to 4 cm in  
diameter, thin wall  
apertures, Node not  
thick nor protruding  
but marked on  
one side by 2 lines  
(insertion of culm  
sheath?).

Probably up to 15-20  
m (not measure)  
They ~~do~~ think that  
the bamboo had  
died probably no more



then 3 months ago  
for the ~~first~~ 40 letters  
over. on 6 months

In the same area is  
abundant and growing  
in association  
Atractantha (same  
as 1<sup>st</sup> collection).

lobed gamopetalous, fused  
of calyx, herbaceous  
PAA (for the first one)  
buds & leaves (2 nals)

Node with somewhat  
white hairs -  
Lignose asperous -  
leaves sheath persistent  
at base -



2368

April 7

*Merostachys* -

km. Shirotaia, 12.5 km  
from N of Shirotaia city  
on right side of road  
(same loc. where I collected  
*M. ternata* in '92) - Road  
connecting with BR 101  
Alt. 275 - m -

Photo - no time -

FAA - 2 xals -

very large white wood  
with buds

and small with buds -



12

12

$$= 7.82 \text{ m}$$

Nodes without thick  
ridge, stems without



spherical, ± white  
narrow band left over  
for sheath?

Many branches per node  
small-medium thickness  
in typical Menziesia  
bud arrangement.

Bud complement with  
one large prophyll and  
several? buds, I saw several  
or at least a few even  
in lower nodes of  
culm.

Culm sheath deciduous  
persistent but not reflexed  
with reflexed, caducous  
blade.

Leaves lanceolate, narrow-  
medium to small size  
few and short oral

setae -



April 8.

2369

Mentawai.

Pay São João

44 Km N.W. of Irian

High side road toward E

from Mt. to Luvuvu. Jag-

from a falls (carrage)

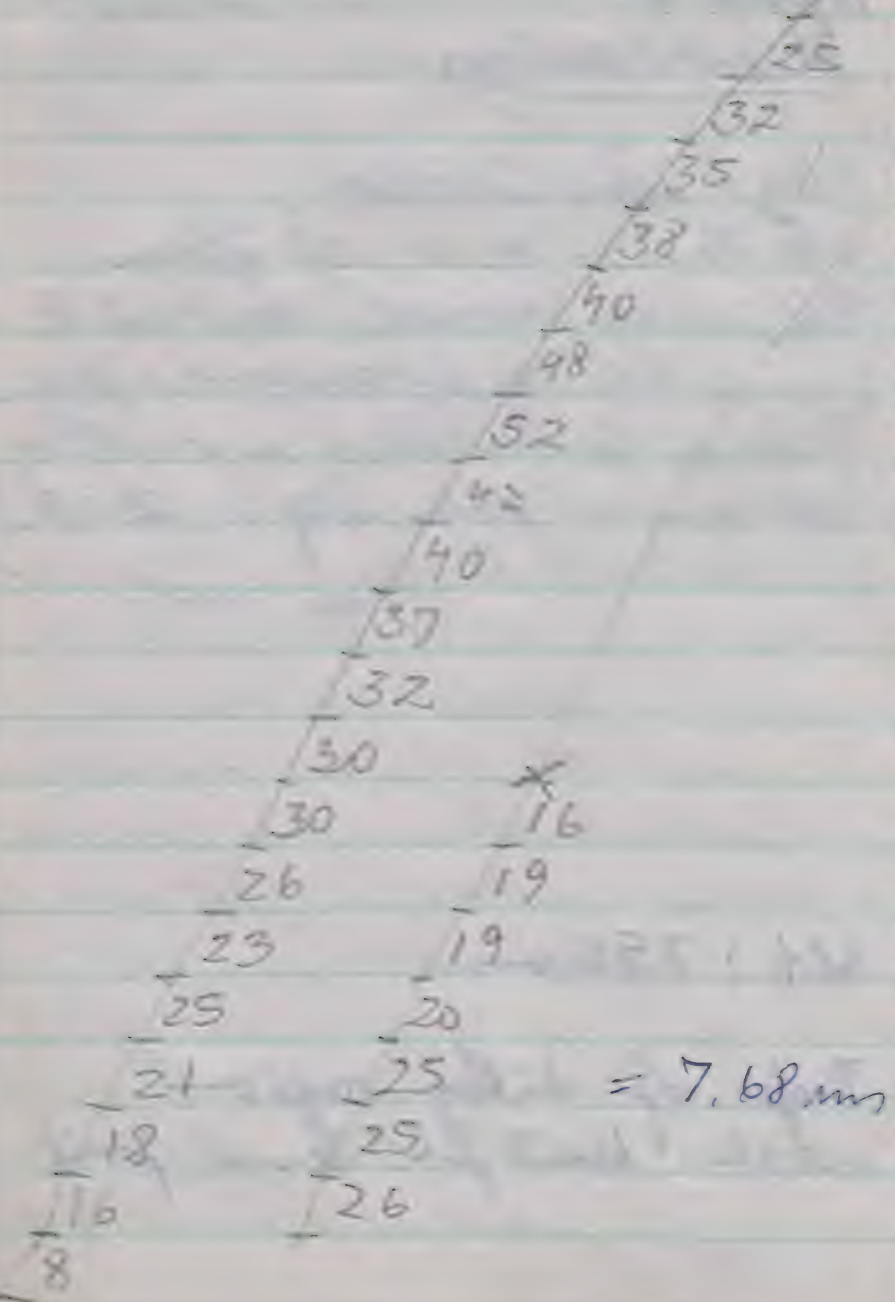
from - Jagung - 28 Km

see next -

Alt.: 750 m.

Top of Lilly region  
with beautiful dense forest





"More type of forest, dense  
skin trees not very thick  
many palms *Boerhaavia*  
common on top of trees  
Palms: "oriana" photos  
taken when 2 B & W.  
Another yusara (they  
collected in Porto Seguro  
Oriana 2-3 m high  
with fruits -

*Morotachys* ~~very~~ abundant  
under the trees. culms  
1-1.3 m high, very  
smooth, covered by white  
wax, node smooth  
not prominent.  
culm sheath smooth  
blade reflexed. coidige



at which wall this  
Delicate Santos, with  
thin small leaves -

It is similar to the  
one collected yesterday but here  
leaves have white  
long very curly oval  
retic. - like wool-  
bud complement.

sheath Menziesii type  
typical.

Forms dense clumps,  
climbing over, repeats  
but lower than  
tall trees -

We saw this Santos  
at much lower elevation  
350?± but less studied.

look similar in part  
to Menziesii sp. (ebb  
# 2368) but that (2368)

has thicker, culms, larger  
leaves, in fresh looks  
a little more robust  
and. This one has  
thicker, curly, oval retic  
the other one per and  
short.

Forest is finer than the  
one on the other  
serra (Fay. Macedonia)

FAA. 2 nodes, one large  
with bud, 1, 50cc with  
leaves.

Plots: B. & W. roll.

Roll 19, for typing? to



half? ~~was~~  
 color Ektachrome roll 21  
 or (18 to ~~ten~~?)  
 ↓

took photo on passage  
 to Jaquequara country -  
 forest of big trees João  
 Aguiar tented up when  
 change lenses from  
 wide angle to up close  
 lens -

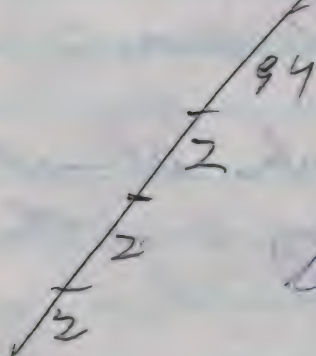
2370

Athertonella

same loc. but lower  
 alt. • 650 - 600

3 km from entrance of gorge  
 41 from Zica (25 from  
 road to Apuracene).

Photo. B & W roll 19 (27-36) &  
 living plant collected.  
 (3 ~~live~~ ~~plants~~ ~~of~~  
 vine)



color roll #22



Very abundant in dense  
forest  $\pm$  from 650 -  
near also 600 and  
forming some lower  
climbing forming thick  
mats of branches  
with trees and other  
plants.

Very difficult to cut  
down "one" plant -  
keeps sending out new  
ones and branching  
and branching.

Leaves  $\pm$  thin -  
at base of old ones:

Young culms dark about  
black green very smooth  
flexible,  $\pm$  oval.  
a little

alp

Photograph to 18 mm. 20  
about 1/2 inch  
to take one to  
without looking

1.15 mm.

2 mm



callos leaves ~~with~~ peristome  
and coste deciduous

When brachae start  
to develop. and it's  
push out. It falls  
very late, sometimes  
peristome very old.

Leath with strobilae  
bristly first. bristly  
to replace a little but  
usually with strobilae  
curl in concave  
fashion up yy  
~~strobilae~~

Back of strobilae with  
thick callos scars at  
base on dorsal side  
band of stiff golden  
hairs toward peristome  
like eyelashes.

brachae in transverse  
in development.

One central bristly  
sometimes not developed  
on both sides may  
very small, and  
all equal 2° brachae  
bent one with  
upward base. Very  
fragile and brachae  
developed and long  
on each weight.  
Plant keeps bristly  
and shrubby.

Very weak plant to  
~~be~~ erect for more  
than 2 meters.  
Some seen climbing  
very high on trees  
but strong like



Sclerostemum plant -  
culs  $\pm 1.2 - 1$  cm in  
diameters.

Leaf thin small  
seen the same of  
Thrinotria (alt 2357) but  
much taller.

Beautiful tree, close  
forest.

Oral setae a little curly  
also golden.

I saw area mixed with  
Atractantha. Thick Merostem-  
mum seen, flowers not seen  
to rotunda and old, it seems  
same as in Thrinotria  
M. multivernice?

April 9, 2371  
*Moniocaulon glaberrimum*  
*Guzmania?* (Lacep.)

Alt. 320 m?

Fazenda Jusara

Município de Japunaquara

4.5 km N of Apudema

on road to Japunaquara  
(~~at~~ right side of road)

Hilly region, on both  
sides of road.

Lower part and middle  
part of slopes have  
been cut down, only  
on the top part  
remain, sometimes  
seen this is disturbed.

---

52 km from Ipiaú



~~✓~~

17  
19  
19  
22  
23  
25  
24  
24  
22  
24  
22  
25  
~~28~~ 10 bar  
28  
29  
36  
42  
46  
45  
37  
24

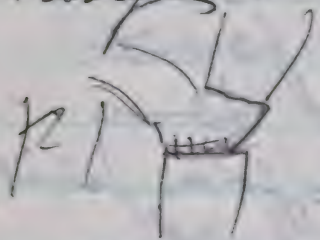
15  
17  
17  
16  
15

(6.33 m)  
tall

Growing at base the  
edge of ~~cut~~ front  
(rest of cut from  
above) in higher part  
of slope of hill.  
Higher up only Heron  
chips (rest of Abies  
C.C. - T. #2368)  
Bending over repeat -  
Mushroom chips not  
crowded.  
Culm 2.25 - 2.5  
found only 1 piece  
old & rotten very  
thick 3.5 about 4cm  
Culm smooth  
sealine slightly appears  
in some part of the  
plant



Nodal zone with 2  
ridges, with leptos  
of fiber, for  
sheath in  
lower ridge



Sheath <sup>+</sup>tuberculate block  
erect with annular zone  
tuber, like *Benthamia*  
persistent, only late  
deciduous, when bark <sup>is</sup> ~~is~~  
juvenile lustrous, and  
with wine color  
spots. (natural?)

Bark hollow <sup>+</sup>thick  
wall, green with some  
very small hairs, shiny.  
~~is~~ pro.

Bud complement: in  
lower node only one

small bud?) at least  
one prophyll near.  
Develops a central  
main axis and 1, 2 or 3  
on each side, much  
smaller. On thicker  
new culms the central  
form a thick branch  
very long. In others  
is not so dominant  
thick branch with  
the culm sheath almost  
persistent or late deciduous  
and long prophylls  
culm sheath persist  
very late, dried and  
tan color, like  
dried leaves. Not  
spines.

It does not look like



typical bamboo to me,  
at least the ones I've  
collected before.

Grows in a small  
area, probably the  
rest of what was  
before a beautiful forest.

Photo B & W. ~~will~~ will #20

1 to - 14A

Ektachrome - from ~~15-17~~  
to ~~22~~ (not 24)

FAA : 2 rats - large with  
buds, small with  
leaves.

1 small bamboo collected  
for cultivation.

leaves very smooth  
long, narrow

with quite asymmetric  
midrib.

culm sheath thick, especially  
at base and fibrous.  
When they fall they leave  
fibre attached to node

In same area see (not  
collected) *Meritachys* from  
San Jose.

leaves will almost  
in minute of cutting  
the branches





April 10

2372

*Atlatylas cordillaris?*

6 km from Apusene  
toward Japaguana  
on road Ap-Jap.  
From a photo 5.3 km

Alt. 275 m.

Mun. de Japaguana



10.20  
 2 needles long  
 the total

low in small patch  
 of forest, rest of  
 cut down - on a  
 smooth slope.

thin twig, very compressed.  
 About 10-11 cm or  
 probably more, break  
 low of the branches  
 when I pull down.

break thin to 1.2 cm  
 diameter - solid and  
 hard, almost woody  
 at base, <sup>a little</sup> softer upper  
 parts, "lign", spongy  
 at base of internode  
 above branches.

Node like hair, a pointed  
 ridge. No petioles.

~~One~~ One central very  
 laminated & thick



back, and may, may  
thin on both sides  
Prophylla a bracte, white  
to bracte.

culm sheath persistent  
in lower part culm  
when no bracts develop  
they dry up and wither  
of culm. Very thick  
at base and toward  
side, with thin

papery edges, sometimes  
quite large and a  
~~small~~ row of auricle  
or expansion of  
sheath at base on  
opening. On the  
back a very thick,  
prominent, dark,  
black reticulation,

collar. Sheath very  
to thick and some  
pappery and mucous  
on edges, very white  
sometimes or at dissep-  
timents?

the very small, for  
unnoticeable and  
retic.

Culm when very thin  
no so much mucous  
less very thin, delicate  
small.

FOA Bud.

fol. 8 W in soil 20 and  
1/2 of 23

color Ek. 22 f. or 23

and beginning of 24

bracts with leaf

when first bracted



at base, with very  
small internodes.  
In some forest from  
Merostachys thick herbs  
collected in Thirakia (C. collina)  
no collected here.  
Here Merostachys from beautiful  
shaded, tall and thick.

Nacorea KMO 2373

~~Alsinia~~ filiformis

same locality 10. April 1976

Only one large clump  
found under shrubs  
in  $\pm$  open and  
 $\pm$  disturbed sea view  
edge. Near Atlatla the  
Tall, thin, and weak  
culm  $\pm$  1 - 1.20 m  
not stiff but  
bend over with  
several in fl. Flowers  
white.

FAA. leaves & spikelets

Photo. Box W, Roll 20 from 22

color Ekt. roll # 24, ~~roll~~ 29 to 38

of roll # 22 (part in next  
roll 24?)



2 + 32 + 2 + 2 + 2 + 1.90

10.22 m

April 10

*Monioranthus hirsutus* 2374

*Benthamia guianensis*?

Net. 250 m.

2 m. 2

of Apua-  
at road  
46 km from  
at road (A  
Tian)

in flower,

rec -  
#23

24 (18 to 32)

62 d. Spiovi

9 d. Apuanema

46 d. Entocoda

Km.



46 Km.  
da Entrada

9 de Apuaranema

62 de Ipiair



$$\begin{array}{r} 62 \\ 46 \\ \hline 16 \end{array}$$



to back.  
2 + 32 + 2 + 2 + 2 + 1.90

10.22 m

April 10

*Monarda hirsuta* 2374

*Benthamia fruticosa*?  
(on floor)

Alt. 250 m.

km. de Japuzgauru

9 km N.W. of Apur-  
ena on road to Ad  
Japuzgauru (46 km for  
entrance of that road &  
61 km for Apurina)

FRA: 3 : buds, inflos,  
leaves -

Seg. 1 : inflores -

Photo: B & W. roll #23

Ektoch. roll 24 (18 to 32)



culm diam. 2.5-3.5  
cm with max.  
in. etc -

sheath with golden brown  
stiff hairs,  
~~the~~ culm green <sup>like</sup> <sup>new</sup> <sup>wool</sup>  
by white hair or max  
come off by rubbing  
Node not prominent  
small narrow black  
ring, rest of sheath  
whenever remain  
culm sheath very  
late deciduous, with  
erect long & rather  
large blade, auricle  
long oval etc.  
Back with by brown  
golden hairs, very  
stiff, hard to touch

But as plant, one  
but see how in culm  
back with: start  
a large main shoot  
and 2, 3 or several  
much smaller shoots  
at nodes. Beautiful  
hairs covering the  
culm with very  
thick woolly wool, very  
small tufts in  
small shoots.  
In ~~one~~ a few spots  
in flower, very long!  
spikelets



2375

April 11, 1976

Chungue (Ritzye) 1/4 -

Mn. Japneenare, 38 Km  
SE of Japneenare  
city, on road Japneenare  
Ppneenare -

Alt. 350 m. + ~

Forest on hills slopes  
out from top to edge  
of stream -

Very abundant on lower  
part of slope and  
along the stream  
and slope road.  
Including bamboo, oak  
trees, herbs and



leaning over after  
upset - but did  
retention - in  
about in in  
sites.

bulbous sheath very  
tight, scabrous with  
blade narrow acuminate  
erect, almost without  
transition

Node thick, promi-  
nent zone with  
2 ridges, like a  
leathery band, very dark  
almost black. A  
membranous extension  
of base of sheath  
extends forward  
covering the buds.  
It breaks, the vine

is implemited or at  
center - Then the tip  
of bud push that  
most away.  
bud complement of 5-  
seven in a ~~ray~~ arc  
around a central one.  
There developed first an  
Are they really all independent  
prophylls? After the  
opening of that "capsule"  
brakes they look like  
Menetia.  
bud ending in large  
- med leaf complement  
with a thick,  
black node near  
base, as an arti-  
culation.  
Plant look now



full developed and  
mature with  
old culms woody  
and strong at  
base

branches with leaves  
develops in opposite  
direction from apex  
of culm

Articulation of  
axis, (branch) of  
leaf-complement  
very noticeable, rustic

leather type of  
tissue, salk.  
Sometimes for that  
note a small  
branch with leaves  
develops

Tall border can

nodes  $\pm 18$  cm.

diameters  $\pm 1 - 1.75$   
spurs 2 in larger

PAA: 2 rich, but 2  
leaves

Photo B & W. roll 25

late 25  $\pm$  7 last part of roll 24?

color Ektach. roll ~~25~~<sup>26</sup> late  
28 - ~~200~~ - (last also of roll

~~28~~ 24, 33 & 34 Pet seque

with Kieselsohn! -

35 to 37.)



April 11, 1976

2376

*Merostictus* (fresh!)

Alt. 550 m -

Mn de Japaguana

Rd. Jap. - Apurimac

35 Km. from Japaguana  
city.

Near the road on  
west of fort, ~~growing~~  
growing on ~~the~~  
bank of savanna.

The same bamboo seen  
several km. W + S  
in a forest on steep  
slope abundant.

FRA - 2 vials but 2 have  
Photo: B. ~~with 25 + 26~~ <sup>no</sup>

Ekte: a few color with 26 - later  
or 25 30±



	47
	48
	50
	47
	44
16	36
2	35
2	32
2	33
2	*32
2	33
2	33
2	35
2	35
2	35
-	34
2	36
2	35
29	47
26	48
20	47
5	



Bud complete  $\Delta$  shell  
with sometimes 3  
lines of buds  
bud sheath smooth  
very soon deciduous,  
thick, brown dried color  
smooth, striate,  
narrow above with  
reflexed, small lobes  
very soon deciduous -  
leaves rather large  
narrow lanceolate  
glabrous, no oral setae  
bud sheath shiny  
brown inside



April 12

2377

Atractantha (ouranota)

Mun. de Japareguara, 22  
km SE of Jap. city  
on road to Apucarana

Alt: 650 m. s. m.

Part of fruit, at feet  
small patch of  
capoeira. Very abundant  
all over under the trees  
and climbing on crowing  
does not form very  
large clump but  
covers large areas  
branched and branched  
short in fruit to  
show where one culm



end - branch, and  
keeps going. Look  
like *evrododera*.

Culms very little or not  
erect and self supporting  
bending, crawling or  
arching over itself.

Main branch, in time  
extends and go farther  
up a so on -

Culm solid, on base  
of plant, thick old and  
very hard, midrib  
and thinner branches  
no so hard, herbaceous  
texture. In these late  
branches a very clear  
ring of holes can be  
seen near the epidermis  
at base, in young

culms not seen. Surface  
of culms very smooth  
green, shiny - in  
smaller branches sometimes  
torn violet. Culm of  
O section (same oval  
section the last Atract.  
with ear in sheath.)

Culm sheath persistent  
only push away when  
branches develop, may  
remain in the plant long  
time. Sheath smooth  
glabrous with long  
~~and~~ white - or gold, only  
oral setae, densest  
along margin.  
Lacuna very little  
developed in thick new  
culm or not developed  
in small branches



Thick band of golden  
hair at base of shoot  
and node. This one  
seems to be deciduous,  
the hairs fall. They  
are present in new  
culms. In many  
branches is not large  
there.

Nodes with prominent  
ridge. (Lanceolate  
foliaceous hairs at apex)  
Culm rounded and  
curved on the opposite  
side of bud.

Bud confluent with  
dominant central  
axis, several (but  
not many - many)  
branches on side. Bract?

and frequently very  
sometimes, high in  
branches main branch  
does not develop

Branches of 2<sup>nd</sup> order  
(carrying the leaf comple-  
ments) with short  
internodes at base and  
thick nodes, sometimes  
branching.

Leaf sheath well  
propped, leaves narrow  
but not so small  
as in the others. Sheath  
obovate - long, white



FRA. 2 nels large  
in ph buds a culm  
sections and 2° with  
leaves and + culm  
sections.

Photo: B. & W. roll # <sup>25</sup> V+ 10  
iltimer a roll # <sup>27</sup> 1 to -

Ektar: roll # 26. cont.  
6 ± - and roll # - enter  
28

long fast wheel

*Saccharum villosum* Steud  
det S. Renvoize

April 12

2378

~~Saccharum villosum~~

M. Japuremano - ± 22 km  
from Yaguap. city  
on Rd to Apurimac

Near patch of forest  
with *Atractodes* etc.  
In swampy depression  
in some part in  
mud or water.  
Tall grass in clumps  
up to 2.50 m +.

FRA - IV. grass with  
hairs a in flwr.  
Borg - 1 nelt in flwr.



April 13

2379

Mun. Jaguaquara, ca. 9.5 km SE of  
Meritachy (joso in flower)  
Jaguaquara, Faz. Mundo Novo. Elev. 700 m.  
Dominant to the throughout medium dry  
forest, forming dense clumps, the culms  
leaning over trees, up to 15 m. Culms with  
thick walls, hollow in small branches,  
otherwise filled with soft pith;  
surface asperous, up to 2 cm in  
diam. Nodes with prominent nubs  
and many thick branches. Culm  
leaf long, narrow, triangular at the  
tip with extremely reduced blades,  
present only at the top of new  
culms, soon deciduous. Sheath drying pale  
on upper part and becoming reflexed <sup>found</sup>  
in post-flowering stage, but only in  
one small patch.

2380 Meritachy

~~Meritachy~~ 10 = 15 m  
20 cm  
2  
2  
2  
2

April 13.

2380

Meritachy

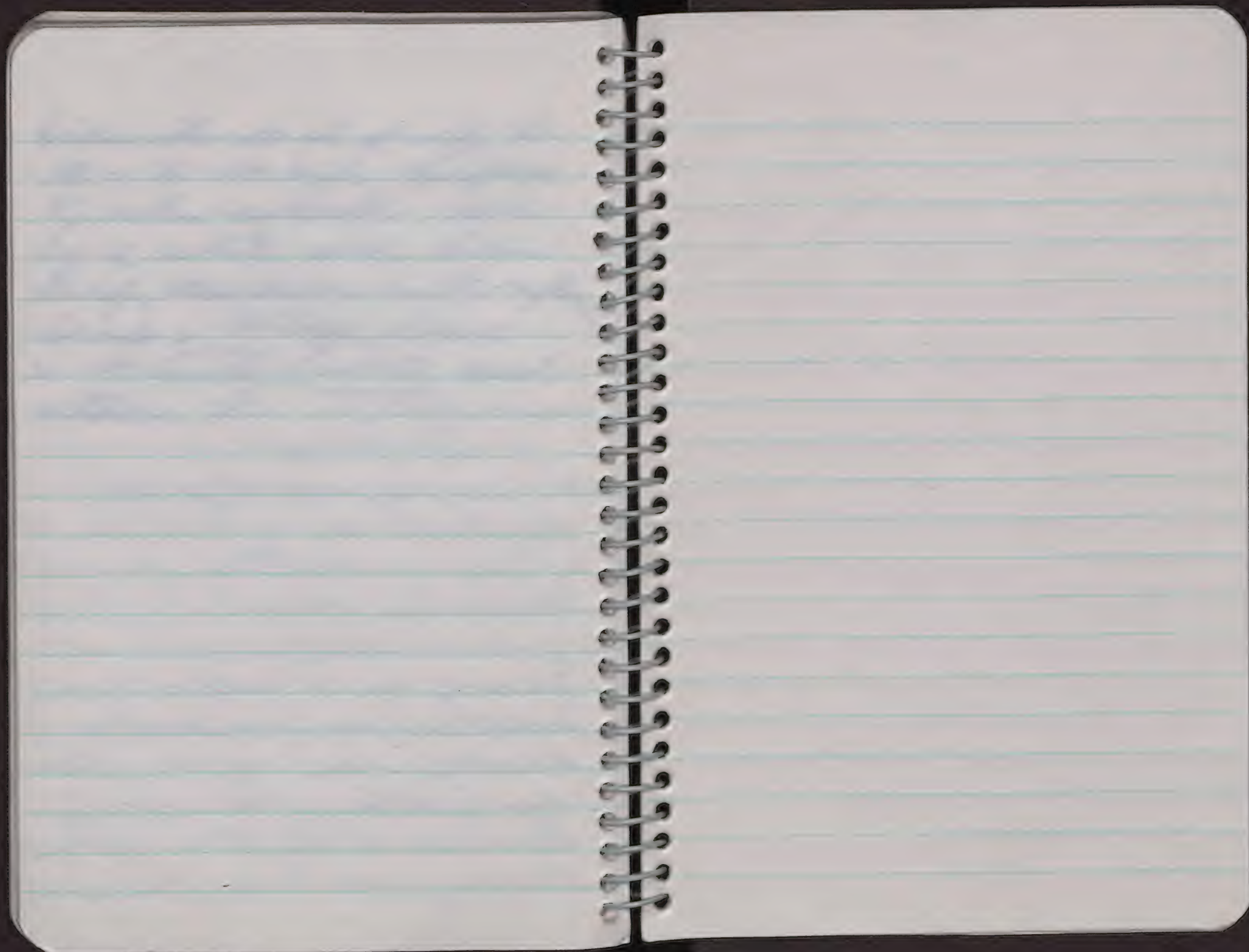
Mun. Jaguaquara, ~~Faz. Mundo Novo~~  
Mundo Novo, ca. 9.5 km S.E.  
of Jaguaquara, <sup>city</sup> Faz. Mundo  
Novo. Elev. 700 m.

Growing in a patch of  
medium dry forest where  
another species of Meritachy  
~~is dominant~~ (C.E.P. 2379) is  
dominant. Culms hollow  
leaning over trees; 1.5 m in



diameters and up to  
10-12 m high. Surface  
of culm smooth, covered  
by a white wax. Culm  
leaf, deciduous with reflexed  
blade. Foliole leaves  
with curly, white, oral  
setae.











lost back completely -  
of M. Thoma -

- 15 20<sup>+</sup> to 20<sup>+</sup>  
32 Mesthach, thick  
brakes - fairly good -

Roll 18 (Etracae) (18 B & W)  
10 Thiolae?

Mesthach top some fog -  
100 good -  
Mesthach, fairly  
de 10 more - 2

Roll 19 B & W April 9  
Mesthach 750 m. fog.  
100 good.  
Thiolae the same fog -

Roll # 20 E & W -

April 9 - Mesthach B & W  
7 Tot? and some about  
1000 good - date 22.  
April 10: Mesthach 1000  
de Thiolae -

Roll # 21 April 8 E & W

1000 good, some  
750, 1000 -  
Thiolae - date 15/17 -  
Pat stropo - that  
with with angle OK  
the slope can, report  
to west corner -  
1000 good 1000 -  
April 9  
B & W?

at base of Thiolae



Roll # 17 B. x W.

2-7 - page 12 in last

page 12 in last

page 12 in last

(Masonia)

7 to 15 + last

last of

last of

M. Masonia

15 to last. 30 Masonia

(Masonia Masonia)

Roll 16 F. Masonia

1 - to 20 + M. Masonia

(M. Masonia)

(M. Masonia)

(M. Masonia)

(M. Masonia)

(M. Masonia)



2378

10.2

St. Oliveira

R. D. Moreira 163

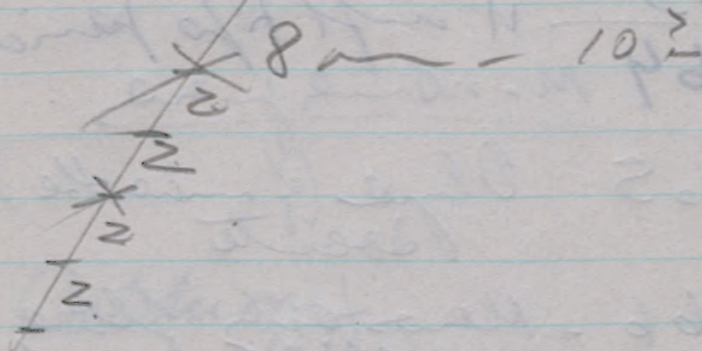
4. Antonio Aug. de Paula

Pop. de São João

telefone 1104 Itapira - GO



2378





- 61 *renesio*  
 2362. *Ichneumon* - infl + free  
 2363 - 11 infl tipo parian  
 2364 *M. renesio*  
 2365 *Olyra* (cf. *micrantha*)  
           *loerle*  
 2366 - *Merostachys* flore -  
           seedling  
 2367 *Merostachys* flore  
           multicaulis?

Calderon  
 note books



- 61 *renesio*  
 2362. *Ichneumon* - infl + free  
 2363 - II infl tip parian  
 2364 *M. renesio*  
 2365 *Olyra* (f. *minutella*)  
           *lorentii*  
 2366 - *Menstary* flore -  
           *seedling*  
 2367 *Menstary* flore  
           *multicaule?*



MADE IN JAPAN